

**SYSTEMS AND METHODS FOR PROCESSING AUDIO
USING MULTIPLE SPEECH TECHNOLOGIES**

ABSTRACT OF THE DISCLOSURE

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An audio splitting system for sharing speech data

5 associated with the same utterance between multiple speech technologies (consumers) comprises a first queue for storing data; a plurality of consumers each sharing the data stored in the first queue; and a scheduler for managing the storage of the data in the first queue and the consumption of the

10 data in the first queue by each of the plurality of consumers. In another aspect, the system comprises a plurality of queues and plurality of consumers. The consumers may include speech engines such as feature extraction engines, speech decoding engines, and speaker identification/verification engines, as well as data compression and decompression engines. The consumers will register their data requirements and priority requests with the scheduler. The scheduler assigns each of the plurality of consumers to one or more of the plurality of queues based

15 on the registered data requirements. In this manner, the sharing of audio data (i.e., audio splitting) can occur at different stages in an I/O processing chain by, e.g., distributing digitized waveforms between different consuming engines and distributing features obtained at several stages

20 of processing of the audio stream.

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